

# ABSTRACT

Systems and methods are provided to establish multicast capabilities for communication systems including wireless communication and internet protocol (IP). An exemplary communication system may include one or more content servers (CSs), IP network, packet data serving nodes (PDSNs), IP radio-to-packet network (IP (RP)), base stations (BSs), and mobile stations (MSs) all communicatively coupled together. The content servers may provide a communication multicast on the same IP multicast address. The PDSN to MS communications may use, for example, protocols IGMP (IPv4) and/or MLD (IPv6) for control signaling of the IP multicasting. These protocols may be augmented by MCFTP. The signaling may include identifiers including the IP multicast address, a flow code that may be generated by the PDSN, a unique mapping reference identifier, and various radio parameters. Various signal flow approaches are presented for establishing and maintaining multicast communication between a content server and a mobile station.

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